

Grounds for Patentability of the Amended Claims over
United States Patent No. 5,129,654 to Bogner ("Bogner")

A. The Cited Reference

Bogner discloses an electronic game apparatus including a chess board 20 (Figs. 1 and 2) having a detector circuit 30 beneath its surface. The detector circuit includes a first eight pairs of generally parallel wires, and a second eight pairs of generally parallel wires oriented orthogonally to the first eight pairs (Column 7, lines 52-63). The orthogonal wire pairs correspond generally to the eight rows and eight columns on the chess board (Column 9, lines 21-28).

Each unique chess piece has a unique associated resonant circuit (Column 8, lines 52-64). The respective wire pairs are cyclically energized by successive frequencies, which frequencies correspond to the frequencies of each of the resonant circuits within the pieces. As the system cycles through all frequency combinations, the circuit in each chess piece responds upon receiving its corresponding frequency, which response is detected in the wire pairs to generate information regarding each chess piece (Column 9, lines 49-57).

The computer 32 is a dedicated "chess computer" including hardware specifically configured for and dedicated to the chess game. As shown in Fig. 11 and as described in the application at Column 14, starting at line 6:

A very promising application for the invention is to utilize it in conjunction with a microprocessor 33 and a voice synthesizer 96 to produce a chess computer which eliminates all the present man-machine interfaces that make playing on a conventional chess computer awkward. . . such a chess game [in accordance with *Bogner* is] a truly personal experience, without any knowledge of computers or symbology required of the player.

The reference also discloses at Column 14, starting at line 20 that in operation:

The chess computer . . . determines a counter-move and utilizes the voice synthesizer to "tell" the player where to move one of the computer's pieces. . . If the player moves the wrong piece for the computer, or moves the correct piece to the wrong square, the computer will know and can tell the player to correct the error.

B. Differences Between the Cited Reference and the Claimed Invention

1. Bogner Does Not Involve Selection by Cognitive Processes In Response to an Interactive Environment Event

The display of *Bogner* is wholly unconcerned with creating an interactive environment for a child or other user. In fact, the player of the system of *Bogner* does not interact with the display at all. The Background section of *Bogner* at Column 1, lines 46-57 makes it clear that the display is provided for an audience watching the chess game.

In one aspect of *Bogner*, because the chess computer is incapable of moving the pieces itself, the computer directs the player to move a chess piece on the computer's behalf. However, in choosing the piece to move, there is no cognitive thought or judgement involved on the player's part. The player is told exactly which piece to move and exactly where to move it. The player's action is merely a mechanical action, without discretion, which is necessary because the computer is incapable of moving the piece itself.

On the other hand, it is a feature of one embodiment of the present invention that a child or other user exercises judgement and/or cognitive processes to select an object from a group of objects for placement at a position on the platform. This is one of the features that allows the present invention to create an interactive environment for a child or other user that is educational and/or entertaining in ways not disclosed or contemplated by the cited reference.

At least Claims 4-21 have been amended to expressly recite these features of the present invention. Additionally, Claims 39-48 have been added expressly reciting this feature.

2. *Bogner* Does Not Disclose an Interactive System Used with a Personal Computer

A second patentable distinction between the present invention and *Bogner* is applicants' use of a personal computer in one embodiment of the invention. Applicants respectfully submit that they were the first to invent a system of hand-held objects that are capable of interacting in the recited fashion with a standard personal computer system. There may be prior art which discloses a system for use with a dedicated microprocessing computer, such as in the cited reference. However, as set forth in the cited reference at Column 14, starting at line 6, quoted above, *Bogner* discloses a dedicated "chess computer", which is structurally and operationally different than a standard personal computer system which operates with the present invention. Moreover, those structural distinctions provide several advantages which are nowhere found in the prior art. Advantages of a claimed invention over the prior art must be considered in determining whether the invention as a whole would have been patentable over the prior art. *Preemption Devices v. Minn. Min. & Mfg. Co.* 732 F.2d 903, 906 (Fed. Cir. 1984).

a. The Chess Computer of *Bogner* Is Isolated from the Outside World

A shortcoming of the cited reference is that, once assembled, the dedicated chess computer of *Bogner* is isolated from the outside world. That is, it is not possible for a user to add to, improve or alter the user interface of the chess computer of the cited reference beyond what is provided with the initial configuration of the system. The user is limited to whatever hardware and software are initially included with the system.

By contrast, it is an advantage of the present invention that the user interface may be constantly varied to create a wide variety of new interactive uses of the system. This may be accomplished by adding new software from the internet or a data storage medium. For example,

the application software generating and monitoring the graphical user interface may be constantly updated to include narration, direction and response from whichever children's pop icon is popular at the time. So when a child or other end user grows tired of a particular graphical user interface, it may be replaced by a new one to prolong the usage of the system according to the present invention. This feature of the present invention adds a level of flexibility to the present invention not disclosed or contemplated by the cited reference.

b. Present Invention is More Cost Efficient than the System of *Bogner*

In order to use the system of the cited reference, an individual must not only purchase the chess board and the chess pieces, but he or she must also purchase the chess computer, which chess computer is significantly more expensive than the board and pieces by themselves and greatly increases the overall cost of the system to the user.

By contrast, the system of the present invention may be used with a standard personal computer. As most homes in the market for the present invention already have a personal computer, all that the end user needs to purchase is the working platform and the hand-held objects according to the present invention. As such, the price to the user of the present invention is significantly lower than the system of the prior art reference, and is accessible to a much larger cross section of users.

c. The Chess Computer of *Bogner* Has Only a Single Use

Moreover, the computer of *Bogner* is dedicated to only a single use, such as a chess game. Therefore, despite the significant cost associated with purchasing the entire system as discussed above, once an individual purchases the system, the chess computer is useless for applications other than the chess game.

On the other hand, as is well known, personal computers for use with the present invention have a myriad of uses outside of the present invention. Thus, the system of the present invention provides an even further level of flexibility not found in the cited reference.

d. Purpose of the Hand-Held Objects of
Bogner Is Not to Interact With a Computer

In addition to operating with a personal computer, another distinction between the present invention and the cited reference relates to the purpose of the hand-held objects of the respective systems. Keyboards and mouse pointing devices pose significant data entry obstacles to certain individuals, such as the disabled and younger children, as these individuals may not possess the motor or cognitive skills required to satisfactorily operate such devices. On the other hand, the disabled and young children are able to manipulate, discriminate, and master hand-held objects with significantly less difficulty than a keyboard or mouse. Therefore, in one embodiment of applicants' invention, the purpose of the hand-held objects is to interact with and enter information into the computer.

On the other hand, the purpose of the hand-held objects in *Bogner* is wholly unrelated to data entry. They are instead provided to play a game, *i.e.*, chess. The data entry which takes place while playing the game is merely incidental from the player's perspective, and is not the purpose of moving the chess pieces around the board.

Claims 27-30 have been amended to expressly recite this feature of the present invention. Additionally, Claims 33-51 have been added which expressly recite this feature.

3. Bogner Has Predefined Spaces For Receiving Objects

A third distinction between the present invention and the cited reference is that the chess board of *Bogner* has defined spaces on which the pieces are located and between which the pieces move. The layout of the board, *i.e.*, the squares, are part of and essential to the chess game of *Bogner*, and it would not be possible for a player to use the system of *Bogner* without them.

By contrast, in one embodiment of the present invention, there are no predefined spaces on the platform and a user of the system is free to position one or more objects on the platform at any desired location. This is true because this embodiment of the present invention does not rely on a layout on the board to provide the interactive environment. This therefore is another feature that allows the present invention to create an interactive environment for a child or other user that is educational and/or entertaining in ways not disclosed or contemplated by the cited reference.

The feature of a platform without predefined spaces is expressly set forth in new Claims 49-52.

Applicants look forward to scheduling the telephonic interview at the Examiner's availability.

Respectfully submitted,

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